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ABSTRACT

Economic impact studies are of substantial value to administrators and faculty at community colleges because they provide tangible and reliable information on the measurable economic returns to be expected from the dollars invested in community colleges, and, therefore, can assist an institution to improve its position with its funding sources. An economic impact study was conducted by Brookdale Community College (BCC) to gather information that would assist the college in obtaining more appropriations from the Monmouth County Board of Freeholders. The formula used to determine the college's impact on the community involved totalling in-county expenditures by the college, its employees, and its students, and then multiplying the total by 2 to obtain an estimate of the indirect impact of each dollar spent. Results of the study showed the in-county expenditures of the college to be $4.0 million, employee expenditures to be $3.9 million, and student expenditures to be $27.6 million. The total estimated economic impact of the college upon the local community was $71.2 million after the multiplier effect was taken into account. Appendices include charts detailing the multiplier effect as it applied to Monmouth County, a chart showing each dollar amount calculated during the project and how those figures were derived, and calculation variables used in the study. (HB)

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THE DIRECT ECONOMIC IMPACT OF BROOKDALE COMMUNITY COLLEGE

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February, 1983

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INTRODUCTION

Mission and goal statements of community colleges have a common thread in that they invariably state that the primary purpose of community colleges is to provide postsecondary educational opportunities to the adult population of the college's sponsorship area. The statements usually include listings of such valuable outcomes of learning as knowledge, creative capabilities, economic productivity and cultural enrichment.

As outcomes actually occur, community colleges may have substantial effects on the communities in which they are located. They may provide business and governments in the area with a well trained labor force. They may generate the technical expertise that is often required in modern times to perform required technical studies for local businesses or governments. They may also vastly broaden a community's cultural resources.

All of these outcomes are highly relevant in any attempt to measure the overall impact of a community college on the community in which it exists. A comprehensive study of all of these effects would be a monumental work entailing sociological, political, and historical analyses of both college and community. When completed, the study of these outcomes could not be presented in cold simple arithmetic terms showing costs and benefits on opposing sides of the ledger. The net contribution of the community college to its community would still be largely a matter of judgement.

The foregoing list of outcomes may be described accurately as long-term benefits because they add value to the community and because they are intangible. There are long-term money-related benefits as well, such as higher salaries, higher productivity, higher spending, and additional tax revenues. These outcomes, although difficult to measure, assist in the accomplishment of such community college missions as better social and economic climate and individual mobility and job security.

There are other outcomes of community colleges, usually not presented in the mission statement, that are more direct and more measurable, one of the most significant of which is that they bring revenue to their locality. Community colleges serve as substantial producers of jobs, as consumers of goods and services, as owners of property and as depositors and investors of cash resources that contribute to an expanding credit base.

The people who live in the area in which a college is located often think of the institution in terms of their own personal social interactions with its students. Merchants, landlords, bankers and other business persons may be sensitive to the students and college employees as sources of additional income for their business venture. However, the total economic relationship between the college and the community is not generally known.

The second set of outcomes presented above are more current and short-term, their benefits are measurable. Community colleges bring funds into the economy through several revenue sources: tuition and fees, local and state appropriations, private gifts, and federal

grants. The colleges circulate funds into the economy through expenditures: salary payments, purchases of goods and services, and capital construction. The ability to accurately measure, analyze, and present these economic outcomes is becoming an ever more important skill for a community college president, business officer, or research administrator.

THE PROBLEM

Today, the economy is unpredictable, many governmental resources are becoming scarce, and enrollments are stabilizing or declining. In the 1980's, the achievement of a community college's mission and goals (long-term benefits) may depend on the ability of the college administrators to accurately state its current economic impact (short-term economic benefit).

Economic impact statements, prepared in a careful, thorough and systematic manner, are becoming a necessary weapon in the college arsenal as it does battle with legislators over public appropriations. Yet, up to this point in time, only two economic impact studies have been conducted at New Jersey's community colleges. A statewide study of economic impact has never been attempted. Campus administrators have repeatedly complained about the complexity and time consuming nature of the dominant economic impact study models produced by Caffrey and Isaacs in 1971.

BACKGROUND AND SIGNIFICANCE

The General Perspective

Arguments by college officials about the successful production

of outcomes by their colleges have begun to fall on deaf ears in local and state legislative chambers. One possible tactic to deal with the appropriation problem is to set aside an examination of the social values of education for a more direct approach, a look strictly at an operating system's impact on the economy. If the system carries its own weight financially, if the return is at least as great as the investment the taxpayers make, positive value is evident. In fact, one author has stated that there are at lease six positive economic benefits that community colleges contribute to their local economies:

Colleges contribute to an increase in technical skills and income of students, with accompanying increases in spending in local businesses; colleges help reduce costs tc local businesses via the availability of a skilled labor force; the local economy is assisted by college and staff expenditures and bank deposits in local businesses; colleges provide local residents with cultural services at reduced costs; local business revenue is generated by college activities and programs; and property values are enhanced by the presence of the college.

The interaction of the economy and higher education has been in evidence since the early establishment of colleges and universities in the United States. In relatively recent years, there has been sharpened recognition and improved understanding of this interdependence.

Educators and economists have been measuring the economic impact of colleges for about twenty years. In essence, they have

treated colleges and business enterprises, excluding the long-term educational benefits of existence and measuring the current direct economic contribution to the community. Community colleges have been the focus of much of this activity.

Economic impact studies are attempts to measure the circulation of college expenditures in the local economy (see Figure 1). The studies measure employment, business volume, tax revenues, bank credit and personal income, and state and federal revenues. They also employ multipliers to more accurately measure cash flow.

An economic impact study enables a community college to improve its position with its funding sources. Community and college relations are documented. Political leaders are made aware of the tax burden eased and tax revenues generated. Faculty and staff become more aware of their contribution to the economy. Taxpayers see that their outlay does not just disappear and college administrators have a useful tool in making decisions about the future direction and priorities of their institutions.

Economic impact studies are of substantial value to administrators and faculty at community colleges because they provide comprehensive data for political purposes. Without them, endeavors to achieve greater local and state appropriations will be handicapped by the lack of tangible and reliable information on the measurable economic returns to be expected from the dollars invested in community colleges. The results of economic impact studies often are surprising

to the public and, indeed, to the academic community in terms of the prominent economic status of the college as an employer, consumer of goods and services, investor and property owner.

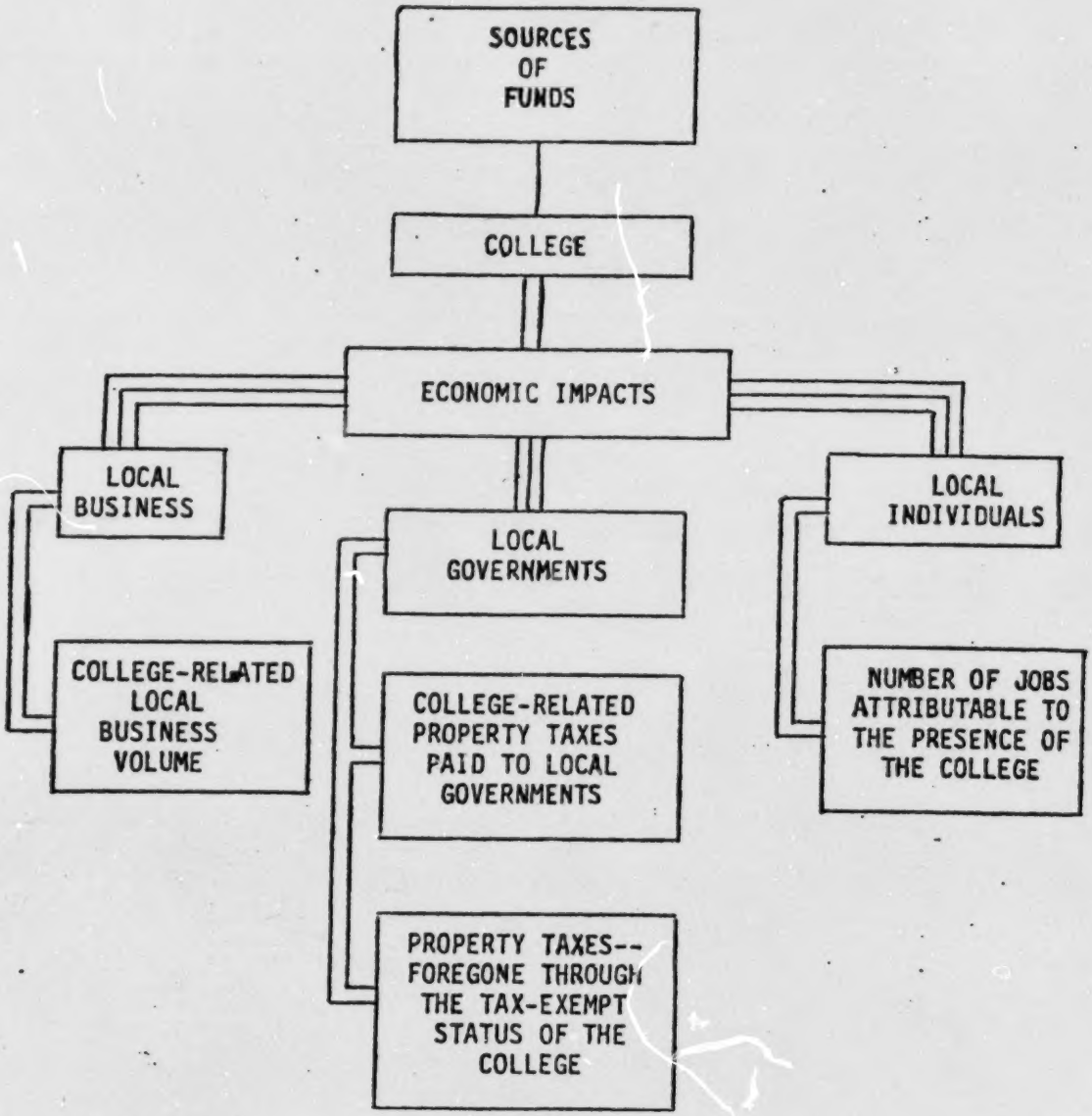

SOURCES OF FUNDS
COLLEGE
ECONOMIC IMPACTS
LOCAL BUSINESS
LOCAL GOVERNMENTS
LOCAL INDIVIDUALS
COLLEGE-RELATED LOCAL BUSINESS VOLUME
COLLEGE-RELATED PROPERTY TAXES PAID TO LOCAL GOVERNMENTS
NUMBER OF JOBS ATTRIBUTABLE TO THE PRESENCE OF THE COLLEGE
PROPERTY TAXES-- FOREGONE THROUGH THE TAX-EXEMPT STATUS OF THE COLLEGE

Figure 1

Economic Impact Study Model

Source: Stanley Baum. The Economic Impact of Mercer County Community College on the Local Community. (Trenton, N.J.: Mercer County Community College)

New Jersey Perspective

The community college picture in New Jersey mirrors that in the rest of the nation. Sector-wide enrollments continue to creep upward as public appropriations remain constant. State appropriations increased only five percent in FY1982 and not at all in FY1983. In fact, state appropriations per full time equivalent community college student have steadily decreased over the past five years because enrollments have surpassed the number funded by the State. The "budgeted" full time equivalent figure has remained almost constant for community colleges for many years while other sectors have made substantial gains (Table 1).

The counties that sponsor community colleges are pushed to the limit by state and federal mandated programs. In addition, New Jersey has a statutory five percent cap on annual increases in expenditures. Yet, the county governments have been able to give the colleges acceptable increases (Table 2).

With the economy as unpredictable as it is today, and with the current negative attitude toward new taxes, community colleges will certainly not have as easy a time in the future with their county sponsors. Economic impact arguments will become more necessary.

New Jersey appears to be receptive to these economic impact arguments. New Jersey state and local governments are busy trying to improve tax structures, transportation systems and marketing approaches in attempts to keep the businesses they have while becoming more attractive to new enterprises. Community college administrators need to formulate economic arguments in a more systematic manner.

Table 1

A Comparison of Budgeted State Support for Public Institutions of Higher Education in New Jersey

Institutional Support for Full Time Equivalent Students

Fiscal Year	New Jersey Institute of Technology	Rutgers University	State Colleges (8)	Community Colleges (18)
1967				
1968	$1,158	$1,259	$ 769	$600
1969	1,388	1,439	822	600
1970	1,601	1,613	858	600
1971	1,752	1,682	916	600
1972	2,045	1,762	916	600
1973	2,183	1,673	1,055	600
1974	2,286	1,758	1,048	650
1975	2,403	1,908	1,175	600
1976	2,438	1,982	1,137	600
1977	2,492	1,942	1,079	500
1978	1,864	2,276	1,471	700
1979	3,270	2,447	1,696	700
1980	3,564	2,647	1,795	725
1981	3,713	2,876	2,008	725
1982	3,668	3,060	2,162	765
1983	3,922	3,311	2,317	725
Sixteen Year Percentage Increase	239%	163%	201%	21%

Table 2

Summary of Changes in County Support
to Community Colleges in New Jersey

Fiscal Year	County Appropriations ($000)	% of Change
1977	42,151	
1978	43,021	2.1
1979	47,259	5.7
1980	49,970	9.5
1981	54,731	9.5
1982	60,898	11.1
1983	66,140	8.7

The Brookdale Perspective

Brookdale Community College is the largest community college in New Jersey with 12,533 students and a budget over $17 million. Size has not helped Brookdale attract the necessary appropriations to maintain a quality academic and community service program. Brookdale's current sources of revenue are depicted in Table 3 which follows:

Table 3

Brookdale Community College
Fiscal Year 1983 Revenues

Fund Category	Revenue	%
Tuition	$ 4,956,322	28.2
Fees	390,000	2.2
State Aid	4,985,670	28.4
County	5,684,898	32.4
Other Incomes	1,025,000	5.9
Reserves	501,564	2.9
TOTAL	$17,543,454	100.0%

In a speech to the College community on September 24, 1982, Brookdale President B. A. Barringer announced that Brookdale's FY1983 revenue forecasts included three troubling items: another substantial tuition increase, an extraordinary increase in county funding, and no increase in state appropriations.

THE PROJECT

This project addressed the research question: What economic impact does Brookdale Community College have on Monmouth County?

The project was conducted as follows: A survey was developed and distributed with the assistance of appropriate committees of the Council of County Colleges of New Jersey and statewide associations of business officers and research administrators. The survey was field tested prior to distribution.

The significance of this project was that, for Brookdale, an economic impact study was produced that will assist the College in its efforts to obtain more appropriations from the Monmouth County Board of Freeholders. The results of the study will be shared with all New Jersey community college presidents, the Council of County Colleges of New Jersey, local county governing boards and the Joint Appropriations Committee of the State Legislature.

Economic Impact Studies were designed to quantify the major economic inter-relationships between colleges and the local area which they serve, such as counties, metropolitan regions or states.

The Formula

The following formula is being used to determine the economic impact of Brookdale Community College on Monmouth County.

Total in-county expenditures
by the college

+

Total employee expenditures
in-county

X 2.0 = Economic Impact

+

Total student expenditures
in-county

Formula Definitions

Expenditures: Total in-county expenditures by the college would include such items as supplies. Total employee expenditures would include food, housing and transportation. Total student expenditures include food, transportation, books and Student Government expenditures. The expenditures are a total of the goods and services purchased by employees, students and the college operating as a business in and by itself.

Multiplier: The multiplier is based upon the percent of each dollar spent in the Monmouth County business community that is then respent within the business community in the successive rounds of spending. In this case, 2.0 has been chosen as a conservative estimate of the impact of the original amount of expenditures. In other words, the college creates business within the county equal to two times as much as is originally spent by the collage, its employees and students. For example, for every $100,000 spent by the college, students and employees, $200,000 is being generated in local business activity. This ratio is 2:1 or a multiplier of 2.0. (See attachment A).

THE RESULTS

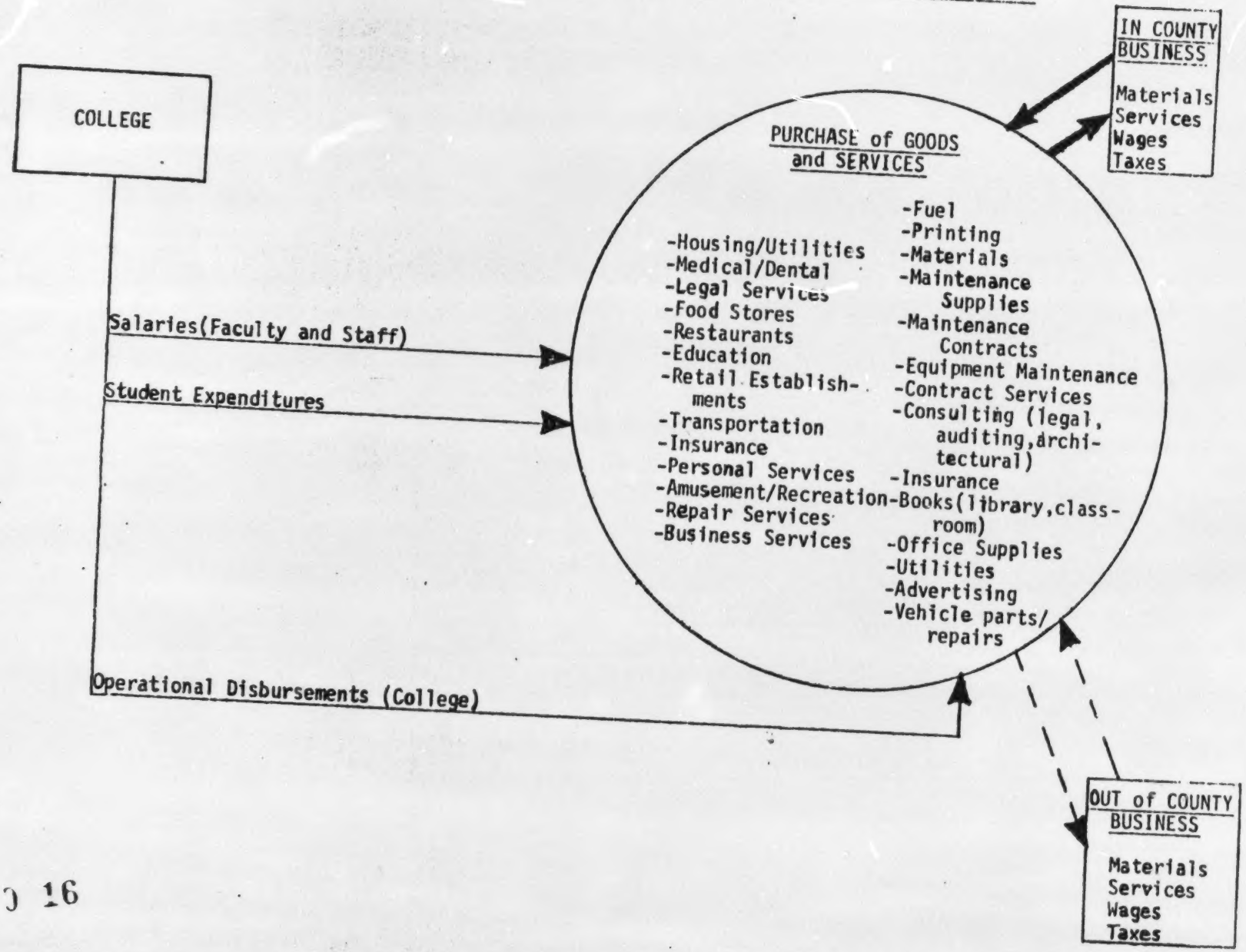
Three College offices assisted the Research and Development Office in the Project: Business Services, Student Activities and Financial Aid. The results are as follows:

Total in-County expenditures by the college	$4,041,634
Total employee expenditures in-County	$3,912,109
Total student expenditures in-County	$27,681,850
Total initial economic impact of the College on the County	$35,635,593
Multiplier recommended by Caffrey and Issacs	2.0
Total Estimated Economic Impact	$71,271,086

The actual calculations are attached as Attachment B.

Attachment A

THE MULTIPLIER EFFECT AS IT RELATES TO THE MONMOUTH COUNTY ECONOMY



Attachment B

DIRECT ECONOMIC IMPACT SURVEY

Part I. College Information

Item		Instructions
1. Total College Expenditures	$7,181,972	1. The source of information should be the end of fiscal year 1982 audit. This figure must exclude salaries, internal items and transfers and taxes.
2. Percentage of College expenditures, as reported in #1, spent in County	54.2 %	2. The source of this information is College Business Records. It may be computed as follows: a. Actual calculation of all in County purchases for a Fiscal Year. b. Review three different months total expenditures. Determine percentage spent in County.
3. Percentage of College expenditures, as reported in #1, spent in New Jersey	77.5 %	3. Use same method as in #2.
4. Total Student Activity Fees, Expenditures	$ 274,919	4. The source of this information should be the Student Activities office. The total should include inter-collegiate athletic expenditures.
5. Total number of College employees	1604	5. This information may be obtained from calendar year 1981 payroll records. (Use W-2 information or FY82 budget data.)
	# / %	
5a. Full-time	560 / 34.9	
5b. Part-time	1044 / 65.1	
5c. Total	1604 / 100.0%	

Part I. College Information
(Continued)

Item		Instructions
6. College employees who live in County	1492	6. This information may be obtained by reviewing address information on payroll or in College directory. If part-time data is not readily available, use the full-time percentage. This figure should be developed at the same time as figure #7.
	# / %	
6a. Full-time	516 / 34.6	
6b. Part-time	976 / 65.4	
6c. Total	1492 / 100.0	
7. College employees who live in New Jersey	1595	7. This information may be obtained by reviewing address information on payroll or in College directory. If part-time data is not readily available, use the full-time percentage. This figure should be developed at the same time as figure #6.
7a. Full-time	553 / 34.7	
7b. Part-time	1042 / 65.3	
7c. Total	1595 / 100.0	
8. Total disposable income available to College employees	$ 7,684,231	8. The source of this information is College Business Records. The figure is money paid directly to staff and does not include taxes and retirement.
9. Total number of full-time students	3,500	9. This information is available from end of fiscal year audit. Use Fall 1981 audited data.

Part I. College Information
(Continued)

Item		Instructions
10. Total number of part-time students	8205	10. This information is available from end of fiscal year audit. Use Fall 1981 audited data.
11. Average annual college related expenditures by full-time students	2822	11. This information is available from the Financial Aid office. The figure should exclude tuition and fees.
12. Average annual college related expenditures by part-time students	2110	12. This information is available from the Financial Aid office. The figure should exclude tuition and fees.

Part II. Project Calculations

Item		Instructions
13.	Total Student Government expenditures spent in County $ 149,006	13. This figure may be found by applying percentage computed in #2 to total reported in #4.
14.	College expenditures spent in County $3,892,628	14. This figure may be found by applying percentage computed in #2 to total reported in #1.
15.	College expenditures spent in New Jersey $5,566,028	15. This figure may be found by applying percentage computed in #3 to total reported in #1. The figure includes expenditures already calculated in #14.
16.	Total Student Government expenditures spent in New Jersey $ 213,062	16. This figure may be found by applying percentage computed in #3 to total reported in #4. This information includes expenditures already calculated in #13.
17.	Total in County expenditures by the College $4,041,634	17. This figure may be computed by adding #13 and #14.
18.	Total in New Jersey expenditures by the College $5,779,090	18. This figure may be computed by adding #15 and #16. The figure includes expenditures already calculated in #17.
19.	Disposable income of in County employees spent in County on non-housing items $3,451,679	19. This figure may be obtained as follows: Disposable Income #8 X Percentage of in County Staff #6 X Estimate of non-housing expenditures (Column A) X Estimate of in County expenditures (Column B)
20.	Expenditures of out-of-County full-time employees spent in County on non-housing items $ 46,000	20. This figure may be obtained as follows: Total number of out-of-County Full-time employees (5a - 6a) X $1000.00

Part II. Project Calculations (Continued)

Item		Instructions
21. Disposable Income of in New Jersey employees spent in New Jersey on non-housing items	$ 3,674,368	21. This figure may be obtained as follows: Disposable Income #8 X Percentage of in-New Jersey staff #7 X Estimate of non-housing expenditures (Column A) X Estimate of in-New Jersey expenditures (Column B)
22. Rental expenditures by full time college staff living in County	$ 414,430	22. This figure may be computed as follows: Total full-time staff living in-County X County Percentage Who Rent (Column C) X County Mean Rent (Column D)
23. Rental expenditures by full-time college staff in other New Jersey counties	$ 38,263	23. This figure may be computed as follows: Total full-time staff living in other New Jersey counties 7a-6a X State Percentage Who Rent (Column C) X State Mean Rent (Column D)
24. Total employee expenditures in County	$ 3,912,109	24. The total in-County employee expenditures may be computed as follows: #19 + #20 + #22
25. Total employee expenditures in New Jersey	$ 4,127,062	25. The total expenditures by employees in New Jersey may be computed as follows: #21 + #22 + #23

Part II. Project Calculations (Continued)

Item		Instructions
26. Total expenditures by full-time students	$ 9,877,000	26. This figure is computed by the following method: #9 X #11
27. Total expenditures by part-time students	$ 17,804,850	27. This figure is computed by the following method: #10 X #12
28. Total expenditures by students	$ 27,681,850	28. This figure is computed by adding #26 and #27

Part III. Local Economic Impact

Item		Instructions
29. Total in-County expenditures by the College	$4,041,634	30. #17
30. Total employee expenditures in County	$ 3,912,109	30. #24
31. Total Student expenditures in-County	$ 27,681,850	31. #28
32. Total initial economic impact of the College on the County	$ 35,635,593	32. #29 + #30 + #31
33. Multiplier Effect		33. 2.0
34. Total Estimated Economic Impact	$ 71;271,086	34. #32 X #33

CALCULATION VARIABLES

County	A Estimate of non-housing expenditures	B Estimate of in-New Jersey expenditures	C County Percentage Who Rent	D State Mean Rent
Atlantic	.69	.65	.31	$266
Bergen	.67	.75	.26	356
Burlington	.71	.65	.21	292
Camden	.71	.75	.23	254
Cape May	.69	.60	.24	282
Cumberland	.69	.60	.29	241
Essex	.67	.75	.52	252
Gloucester	.71	.65	.18	271
Hudson	.67	.65	.65	232
Hunterdon	.69	.60	.18	338
Mercer	.69	.65	.29	276
Middlesex	.67	.70	.25	308
Monmouth	.69	.70	.23	291
Morris	.67	.70	.19	353
Ocean	.69	.65	.16	311
Passaic	.67	.70	.41	270
Salem	.69	.60	.24	236
Somerset	.67	.65	.20	340
Sussex	.69	.60	.15	329
Union	.67	.70	.30	283
Warren	.66	.60	.25	278
New Jersey	.69	.75	.31	278

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